



Amendment and Reply
Application No. 09/296,582
Attorney's Docket No. 000952-066
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JUL 26 2001

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REMARKS

Claims 1-17 are pending. The Office Action of April 6, 2001, has been carefully considered. Applicants appreciate the Examiner's indication that Claims 4-6 are allowable over the prior art. Claim 4 has been rewritten in independent form to include the subject matter of Claim 1. Claims 5 and 6 are dependent on Claim 4. New Claims 19 and 20 have been added. The claim amendments are merely a matter of form and are not intended to narrow the claims in any way. Applicant requests that the Examiner consider the above amendments and the following remarks, and pass the application to allowance.

RESPONSE TO DETAILED ACTION:

Response to Election/Restriction

The Examiner required restriction to one of the following under 35 U.S.C. 121:

Group I: Claims 1-17 are drawn toward a trocar,
classified in class 604, subclass 60; and

Group II: Claim 18 is drawn toward a method of using a
trocar, classified in class 604, subclass 506.

Pursuant to the telephonic interview conducted on March 29, 2001, between Examiner Jennifer J. Maynard, and Applicant's representative Cindy A. Lynch, Applicant's representative elected Group I with no indication of traverse. Applicant's affirm the election of Group I without traverse.

Response to 35 U.S.C. §102 Rejections:

Claims 1-3 were rejected under 35 U.S.C. §102(b) as being anticipated by Muir (U.S. Patent No. 1,655,158).

Claim 1 recites a trocar including a cannula for receiving an implant and inserting the implant into an animal, a spring element received within the cannula, and an obturator for delivering the implant from the cannula into the animal. The spring element has a leaf spring for retaining the implant inside the cannula, and applies a frictional force against the implant sufficient to prevent the implant from sliding out of the cannula under a weight of the implant.

Muir discloses an instrument for implanting radon seeds. The instrument includes an implanter, a trocar, and a plunger. The implanter is a tubular body having a bore extending through the tubular implanter. A counter-sunk groove communicates with the bore, and functions as a loading slot for the insertion of radon seeds. A spring or means of forcing the seed into the implanter is attached to the outside of the implanter and passes through a spring receiving channel located adjacent to the sleeve-receiving member. The sleeve receiving member forms a shoulder with the tubular body and a shoulder with the loading slot. In operation, the seed is loaded into a counter-sunk groove or loading slot. The instrument is inserted into the tissue to be treated, and the trocar is removed from the implanter. As the trocar is withdrawn from the implanter, the trocar passes the loading slot, and the seed is pushed into the bore by the spring. The plunger is thereafter introduced into the bore of the implanter and the seed is deposited into the tissue.

Muir, however, does not teach or suggest a spring located within the cannula for retaining the implant inside the cannula. Rather, the spring forces the seed into the bore of the cannula as the trocar is removed from the cannula. The plunger is then introduced to deliver the seed into the tissue. Thus, Claim 1 should be allowable. Claims 2 and 3 are dependent on Claim 1 and should also be allowable.

Claims 1, 7 and 8 were rejected under 35 U.S.C. §102(e) as being anticipated by Harmon (U.S. Patent No. 5,772,671).

Applicant has filed herewith a declaration under 37 C.F.R. §1.131 to overcome the rejection of Claims 1, 7 and 8 based on Harmon.

Claims 9-16 were rejected under 35 U.S.C. §102(b) as being anticipated by Utterberg (U.S. Patent No. 5,536,259).

Claim 9 recites a trocar including a substantially cylindrical cannula body. The trocar has a distal end of the cannula body having a leading edge formed by a first plane which is at a first angle with respect to a longitudinal axis of the cannula body, and a trailing edge formed by a second plane which is at a second angle with respect to the longitudinal axis of the cannula body. The first angle of the leading edge is larger than the second angle of the trailing edge.

Utterberg discloses a hypodermic cannula having a first end formed by a first cut surface defining an acute angle to the longitudinal axis. The first cut surface defines an acute angle of about 20 degrees with the longitudinal axis of the cannula. A second cut is defined along a right hand forward portion of the oval tube edge at a 14½ degree angle. A third cut surface is defined along a left hand forward portion of the oval tube edge at a similar angle to the second cut. The second cut and third cut surfaces define between them a forward cutting surface in the tube edge. A fourth cut surface at the point intersects the second and third cut surfaces to cause the cutting surface to be spaced inwardly of the tube outer wall.

As disclosed in the specification, Col. 3, lines 1-13, the angle of the forward cutting surface is less than the angle of the trailing edge. Thus, Utterberg does not suggest or teach that the "first angle of the leading edge is larger than the second angle of the trailing

edge" as recited in Claim 9 of the present invention. Furthermore, it would not have been obvious to one skilled in the art to modify Utterberg to change the angle because a larger angle on the leading edge would make a less sharp tip which is undesirable for a hypodermic cannula intended to penetrate tissue with minimal pain. Accordingly, Claim 9 is not anticipated by Utterberg, and should be allowable.

Claims 10 and 12-16 are dependent on Claim 9, and should also be allowable.

Claim 11 has been rewritten in independent form. The amendments are merely a matter of form and are not intended to narrow the claim in any way.

Claim 11 recites a trocar including a substantially cylindrical cannula body. The trocar has a distal end of the cannula body having a leading edge formed by a first plane which is at a first angle with respect to a longitudinal axis of the cannula body, and a trailing edge formed by a second plane which is at a second angle with respect to the longitudinal axis of the cannula body. The first angle of the leading edge is larger than the second angle of the trailing edge. In addition, the trailing edge of the cannula body distal end is radiused to prevent coring or tearing of tissue.

Utterberg however, does not teach or suggest that the trailing edge of the cannula body distal end is radiused to prevent coring or tearing of tissue. Accordingly, Claim 11 should be allowable.

Response to 35 U.S.C. §103 Rejections:

Claim 17 is rejected under 35 U.S.C. §103(a) as being unpatentable over Muir in view of Utterberg.

Claim 17 recites the cannula of Claim 9, including a leaf spring fixed within the cannula body for retaining an implant. Claim 17 is allowable for at least the same reasons as Claim 9.

New Claims 19 and 20

New Claims 19 and 20 have been added to further define the protection in which the Applicant is entitled to. Claim 19 is a trocar according to Claim 1, wherein the leaf spring is received entirely within the cannula. Claim 20 is a trocar according to Claim 19, wherein the spring element is received entirely within cannula. Claims 19 and 20 are allowable for the same reasons as Claim 1.

Conclusion:

It is respectfully submitted that the claims are presently in condition for immediate allowance, and such action is requested. If, however, any matters remain that can be clarified by Examiner's Amendment, the Examiner is cordially invited to contact the undersigned by telephone at the number below. In the event that there are any questions concerning the amendments or the application in general, the Examiner is respectfully urged to contact the undersigned so that prosecution may be expedited.

Respectfully submitted,

BURNS, DOANE, SWECKER & MATHIS, L.L.P.

By: 76 m. 2
Kirk M. Nuzum
Registration No. 38,699

P.O. Box 1404
Alexandria, Virginia 22313-1404
(650) 854-7400

Date: July 18, 2001



Attachment to Amendment and Reply

Marked-up Claims 4 and 11

4. (Amended) A [The] trocar [according to claim 1,] comprising:
a cannula for receiving an implant and inserting the implant into an animal;
a spring element received within the cannula, the spring element having a
leaf spring for retaining the implant inside the cannula, the leaf spring applying a frictional
force against the implant sufficient to prevent the implant from sliding out of the cannula
under a weight of the implant;

an obturator for delivering the implant from the cannula into the animal; and
wherein the leaf spring has a plurality of successive bends and the successive
bends are arranged to alternately contact an inside wall of the cannula and an outside of the
implant to retain the implant in the cannula.

11. (Amended) A [The] trocar [according to claim 9,] comprising:
a substantially cylindrical cannula body;
a distal end of the cannula body having a leading edge formed by a first
plane which is at a first angle with respect to a longitudinal axis of the cannula body, and a
trailing edge formed by a second plane which is at a second angle with respect to the
longitudinal axis of the cannula body, the first angle of the leading edge is larger than the
second angle of the trailing edge; and

wherein the trailing edge of the cannula body distal end is radiused to
prevent coring or tearing of tissue.